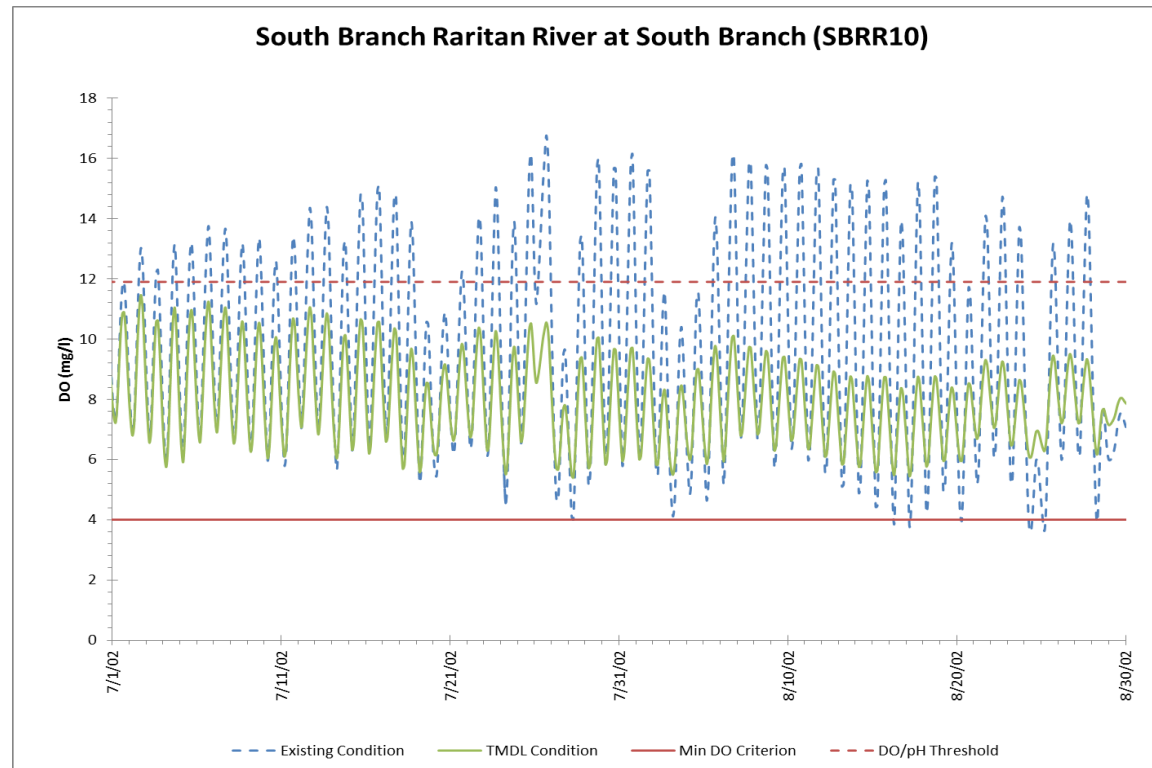


The Raritan River TMDL resolves existing DO, pH, TP and TSS impairments by defining the appropriate load reductions.

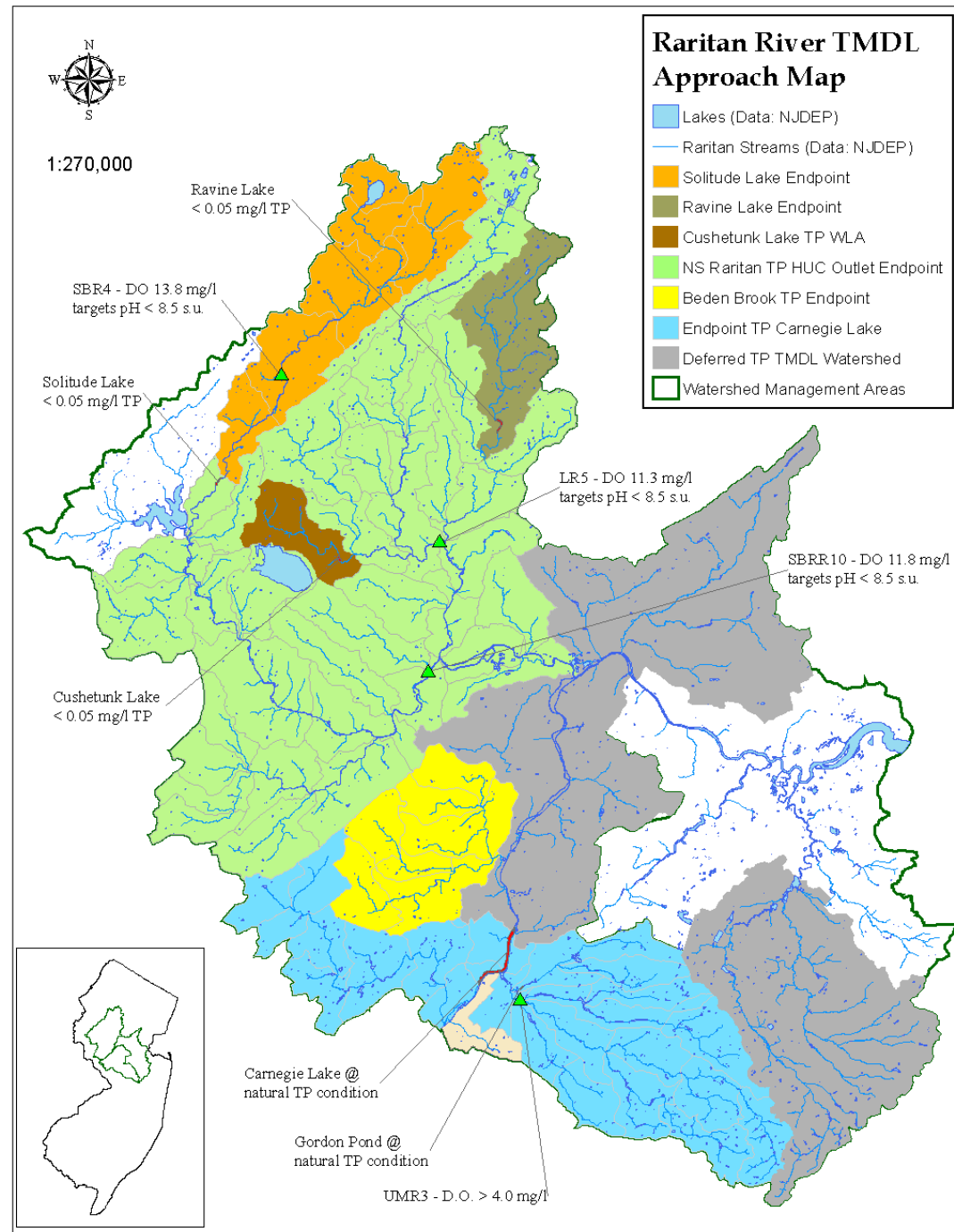


Example of  
TMDL  
Outcome

- ✓ Nonpoint sources reductions assigned between 60-80%
- ✓ Margin of Safety assigned at 10-20%
- ✓ Reserve Capacity included for future growth
- ✓ WWTP loads important at low flow

# TMDL Critical Endpoints

- Three locations where a DO-pH site specific relationship allowed calculation of a TMDL for TP to resolve pH impairment due to excessive eutrophication
- DO condition at UMR3 to be resolved by pending WWTP ammonia limitation
- HUC outlets at 0.1 mg/l TP
- Lakes at 0.05 mg/l TP or natural conditions





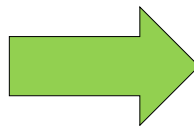
# Approach to effluent input value...

- 1) TMDL simulations start with facility permitted flow.
- 2) Existing effective effluent limits used for TP & TSS.
- 3) As necessary ortho-phosphorus inputs were reduced to cut primary productivity to meet DO/pH endpoints.
- 4) As necessary TP inputs were reduced to meet TP stream and lake standards.
- 5) Ammonia reduction was needed at Princeton Meadows STP to fix minimum DO violation at sample site UMR3.
- 6) Inputs were adjusted to account for higher winter flow conditions while maintaining stream water quality.

# Questions to get rolling...

Is controlling ortho-P at my facility important for water quality?

*Affects 13 of 40 WWTPs*



North & South Branch Raritan	NJPDES Permit No.	Discharger
	NJ0028304	Day's Inn - Roxbury - Ledgewood Propty.
	NJ0021954	Mt Olive Twp - Clover Hill STP
	NJ0023493	Washington Twp-Schooley's Mt
	NJ0109061	Washington Twp-Long Valley
	NJ0020389	Town of Clinton WTP
	NJ0100528	Glen Meadows/Twin Oaks
	NJ0022047	Raritan Twp MUA
	NJ0026824	Chester Shopping Center
	NJ0022781	Valley Rd Sewer Co - Pottersville STP
	NJ0021865	Fiddler's Elbow CC - Reynwood Inc
	NJ0098922	Readington-Lebanon SA
	NJ0026387	Bernardsville
	NJ0033995	Environmental Disposal Corporation

Why are TP input concentrations different for WWTP affecting the same endpoint? *Larger facility loadings have a more significant impact on shared endpoints.*

Other modeling questions... ?

What will permits look like? *Effluent loads must be consistent with the WLA to assure surface water quality standards and designated uses are met.*